

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B27M1/02 B30B5/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B27M B30B B32B B27D B23K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 853 402 C (DYNAMIT-ACTIEN-GESELLSCHAFT) 23 October 1952 (1952-10-23) the whole document	1-34
A	US 6 047 751 A (SUN-TAE AN) 11 April 2000 (2000-04-11) cited in the application the whole document	1, 19
A	WO 00/79137 A (WOODWELDING AG; AESCHLIMANN, MARCEL; MOCK, ELMAR; TORRIANI, LAURENT) 28 December 2000 (2000-12-28) cited in the application claims; figures	2-18

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

6 May 2005

Date of mailing of the international search report

19/05/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Meritano, L

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 601 162 C (MAATSCHAPPIJ AGO N. V) 9 August 1934 (1934-08-09) cited in the application the whole document	1,2,19
A	DE 636 413 C (SIEMENS-SCHUCKERTWERKE AKT.-GES) 8 October 1936 (1936-10-08) cited in the application the whole document	1,2,19

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 853402	C	23-10-1952	BE 502286 A CH 288879 A CH 289169 A CH 290149 A CH 292879 A CH 299564 A FR 1039678 A GB 708342 A NL 83740 C	15-02-1953 28-02-1953 15-04-1953 31-08-1953 15-06-1954 08-10-1953 05-05-1954
US 6047751	A	11-04-2000	CA 2262811 C CN 1232737 A ,C JP 3018328 B2 JP 11291208 A KR 272767 B1	14-11-2000 27-10-1999 13-03-2000 26-10-1999 01-12-2000
WO 0079137	A	28-12-2000	CH 694058 A5 AT 292248 T AU 765622 B2 AU 5056500 A BR 0012297 A CA 2377408 A1 WO 0079137 A1 CZ 20014455 A3 DE 50009925 D1 EP 1190180 A1 HU 0201801 A2 JP 2003502602 T MX PA01013153 A PL 354290 A1	30-06-2004 15-04-2005 25-09-2003 09-01-2001 26-03-2002 28-12-2000 28-12-2000 12-06-2002 04-05-2005 27-03-2002 28-09-2002 21-01-2003 20-08-2003 29-12-2003
DE 601162	C	09-08-1934	BE 375311 A FR 707391 A GB 372381 A NL 29949 C	07-07-1931 02-05-1932 16-01-1933
DE 636413	C	08-10-1936	NONE	